Q: [0:00] We like to start with just – how do you like to introduce yourself?

A: [0:04] Katie Weiler. Do you want pronouns? She/her.

Q: [0:08] Great, thank you. And what year were you born?

A: [0:11] 1990. I actually had to think about that for a second. (laughter)

Q: [0:16] Can you tell me a little bit about where you grew up?

A: [0:18] Yeah. So I grew up in Camden, Maine, born and raised, all the way until I was 18 and then went off to college, but grew up lucky enough on the water – so sailing, all that fun stuff, recreating on islands around Penobscot Bay. Yeah, that was my lucky childhood.

Q: [0:41] Do you have any really fond memories or moments that stick out from that?

A: [0:45] Yeah. Our friend group – everybody was lucky enough to have some sort of like vessel. And we would – when we were younger, all of the parents, obviously, and siblings and everyone, we would go out and then like raft up boats. So we would have like five sailboats rafted together over in like Pulpit Harbor, and all the kids would be swimming and playing. And it was just really fun childhood memories to look back on – hanging out with friends, all rafted up and jumping over to each other's boats.

Q: [1:17] Can you tell me a little bit about your parents – maybe where they're from, what they did when you grew up?

A: [1:23] Yeah. So my parents were Outward Bound instructors on Hurricane Island. That's how they came to Maine. Neither of them are from Maine originally. My dad is from Vermont. My mom is from Connecticut. And they've been there since the '70s. My mom was a nurse for many, many years, but worked on Hurricane in the summers. And then my dad ran Hurricane for many years before going into management consulting.

Q: [1:49] So were you there a lot growing up?

A: [1:50] Yeah, up until – my sister was probably there more than me. He stopped working there I think in like the early '90s. So I was young, but there's lots of pictures on the island, and it's one of those core memories where I feel like I remember a lot, but I don't know if it's also from just stories. (laughter) But we go a lot now.

Q: [2:11] You just mentioned siblings. Can you describe siblings you have?

A: [2:14] Yeah, I have one older sister. She now lives in Connecticut, but she's up in Maine for the summer with her two kids and her husband.

Q: [2:21] Great. And you mentioned both Hurricane Island and your recreational history, but I'm curious if you have any other family history on the water you want to mention – maybe that's with fishing or just with navigation, sailing?

A: [2:33] Yeah, mostly on recreational boats. Sailing a lot. Grew up sailing like Optis and Turnabouts and 420s just in like our Camden Yacht Club program, so nothing crazy. I wasn't in like regattas or anything. But that was a fun group of friends I had in that. And my mom's side has a history of fishing that I think is called angling, if that's the technical term – I'm not a big fisherperson – or that type of rod-and-reel fishing. I didn't grow up rod-and-reel fishing too much, but we would kind of like – my dad and mom from Hurricane knew a lot of lobstermen and stuff like that, so we were definitely in and around the industry. Growing up in Camden, Rockport, Rockland, lots of industry there. Obviously, Vinalhaven and North Haven are really close. And knowing people from there, just lots – I felt like I was kind of in and around the industry, but not like directly fishing.

Q: [3:37] Can you describe that a little bit more for me and maybe the way it felt?

A: [3:42] Oh. I mean, I feel like my later teen years were kind of a tumultuous time in the fishing industry. We had a lot of addiction in our high school, and a lot of that was correlated kind of with the fishing industry. Now, I think it's a little bit different, but I can't speak to it fully.

But I feel like I had – reading through the questions, one was like, would you want your kids to be in this industry? And I feel like growing up, I would have been like, no way. It can lead to such, you know, scary paths. But also, what an amazing industry. And I wouldn't want to live in a state that didn't have a commercial fishing industry, especially the lobster industry. So I feel like there's ways around it. And growing up looking at it, you kind of shift your views of like, OK, there's good ways and bad ways and all the ways in between. And I think not being directly in it, but just looking at it from a bird's-eye view and knowing people in it, I just have had all sorts of views in my head that have shifted over the years.

Q: [4:49] I'm definitely going to come back to those views. But just sort of following along with family, I'm curious – you mentioned not really any direct fishing – with like commercial fishing. Any relationships with people in your family or people very close to you who worked in other roles in fishing or aquaculture? Maybe that's processing, working in canneries, that sort of thing.

A: [5:09] No.

Q: [5:11] Great. And can you describe your educational background a little for me?

A: [5:14] Yeah, like I said, grew up in Camden, just public schools all the way. Went to college at – well, at first, I went to University of Denver, and then I transferred to University of Vermont. And after school, I moved to Boston and did something that wasn't even the realm of my degrees, which was English and consumer and advertising. So yeah, that's the extent of it.

Q: [5:40] Great, thank you. Are you married?

A: [5:43] Yes, I am.

Q: [5:45] Do you have any children?

A: [5:46] No, but I'm pregnant. (laughter)

Q: [5:48] Congratulations.

A: [5:49] Thank you.

Q: [5:51] So sort of returning to the children question, I guess how are you feeling about the marine industry and that future maybe for your child?

A: [5:59] Yeah, I mean, I feel good about it. I obviously chose to do work in this industry and work adjacently very closely with certain parts of the aquaculture and fishing industries. I think the working waterfront is something extremely important to our state and our economy and something we need to hold onto, and I can't have that view if I would say that I wouldn't want to know anybody in it or have my kids go into it. So absolutely that would be totally fine and totally great.

Q: [6:28] Great, thanks. I'm going to sort of transition now away from demographic questions into questions more about your current role. So sort of starting, how would you describe your role in the fishing or aquaculture industry in Maine?

A: [6:33] Yeah. So I founded a company in 2021 called Viable Gear that is working on a seaweed-based plastic replacement. It's a traditional bioplastic, because it's chains of biopolymers. But the word bioplastic has a lot of greenwashing behind it at this point, which is why we call it a plastic replacement.

But the whole impetus of doing this and starting this company was that I had moved back to Maine in 2019. And we were out on Brimstone, which is an island that I grew up going to. It's uninhabited. We would usually find some ghost gear out there. Ghost gear is the plastic pollution from the fishing and aquaculture industry. So we would find some things out there, but nothing crazy, like a few buoys and maybe some trash left behind by people who were there. But this time during the pandemic, we had gone out and we found 121 pieces of trash. It was like a number that's specifically stuck in my head, because it was also just like a really crazy amount of trash. And it wasn't trash that people were leaving behind. It was clearly stuff that had washed up.

So I had been in the global plastic crisis, I guess, space as a side passion for probably three years at that point. And it was also the same time that the Endangered Species Act was coming down really hard on the lobster industry, and they had to change their tensile strength and their breakage points and all of that. So it was kind of a really good time for me to say, all right, how do we focus on

ghost gear and plastic in the ocean while also coming up with a solution for this industry that is being unfairly, in my opinion, treated at this time – just in terms of all of the things that I'm sure you guys already know about.

Q: [8:21] Sure. So can you describe a little bit of the process of getting into the work and what that looked like?

A: [8:26] Yeah. I mean, at the time, I was working for a management consulting company, but decided to found this company on my own and worked in two jobs for a little bit, probably a year and a half to two years, but really was trying to figure out what was out there. To me, I had figured – there's a paper out of the University of Tel Aviv that talked about turning seaweed into plastic, so I was like, great, somebody's probably doing this. We'll just procure that and make gear out of it. That was not the case. There was people doing it on lab scale and writing papers about it, but nobody was really on the market with any product. So then it was really like, how do I find a polymer engineer, materials scientist – because that's not my background. It was a lot of kind of like searching for people who were interested or had time. And again, it was like still trickling into – like definitely not out of the pandemic by 2021, early 2021. So just the way we were working was different.

But I ended up finding someone who was interested at the University of Southern Maine. And we worked with – it's called their Composite Engineering Research Lab – for a little bit and pulled some students in through a grant. That ended up being like helpful, but slow. And they're great, but their background isn't in biopolymers. So we ended up finding another consultant who had been in the seaweed industry for like 30-plus years.

So it was really about networking and finding the right people to work on this project, but a lot of it was I got really into seaweed and how Maine can cultivate a lot of of seaweed and the impetus of where we were starting with cultivating seaweed. And it has similar polysaccharide structure to corn, so, OK, they make PLA out of corn. We can probably do this. From there, we just kind of continued to ramp up and have a prototype at this point. But yeah, that's kind of how I got into it, I guess.

Q: [10:30] Yeah, it's so cool to hear about all of the different people that you're pulling into it. Can you talk a little for me – so in total now, you've been doing this for how many years?

A: [10:42] Three and a half years, I think, at this point. Yeah, it's been a while. So we're finally working towards pilot production in Sweden, which is really exciting. It's been a journey of trying to do it in the US, which hasn't worked. (laughter) So here we are.

Q: [10:58] Can I ask you to speak a little bit more about that?

A: [11:00] Yeah. The US doesn't have manufacturing industry in general anymore. It is all mainly overseas. Especially kind of the way that we're producing our material, it behaves similarly to a textile at this point. We're also in a stream of R&D to turn it into a pellet so that it can be used really directly in plastic machinery that we currently have today. But yeah, that industry just like isn't here.

And I can't get into like too much detail about it, but I can kind of say it starts as a dope, which is similar to a goop, which is similar to Lyocell and Tencel and that type of cellulosic fabrics. So that's kind of where we had to go, and it's just taken a while. And working with universities just hasn't been something that has worked for us. It works for a lot of people in the industry, which is awesome and really important. We've had a lot of really great work with universities, but the speed of trying to like do feasibility trials with that just like wasn't working. And again, the industry of it to try and find people to manufacture it wasn't here, so we went abroad.

Q: [12:14] Can I ask – what is it like to go from idea to market? Because it takes so long. You have so much research you have to put in. I'm curious like if you could describe just what that process has been like.

A: [12:26] Oh, God, it's like tapping into my memory. I feel like I try and like black that out on purpose. But I feel like, yeah, it's – I mean, it's exciting and it's frustrating, and it's like one of those you have kind of all of the emotions tied into it. Because you read about this thing that is happening, and clearly universities have done it, and then it just gets published and sits on a shelf. I am someone who gets frustrated about that, because I'm like there's so many amazing ideas, especially in like sustainability and sustainable materials, that are out there that aren't commercialized, because the IP is sitting at universities. That's totally cool, but also it needs to be in the world and spread out. So I kept just being like, this has to be – this is clearly feasible.

That was where a lot of the frustration was, but also a lot of excitement when you start working with people who know how to do it and are happy to help you and are already in that industry, which is this company Everything Seaweed and Colin Hepburn who we work with. So yeah, it was kind of this journey of like, can we even do this? I started with pretty low hopes of like, OK, somebody can do this, but can I find somebody to help me do this? So I was like baseline. And then from there, you kind of get excited when things start working, but then they don't work that well. You know, it's this up-and-down journey of like, here we are pilot manufacturing, and that's pretty exciting.

Q: [13:54] That's so exciting. I'm curious – like what are the products you're really hoping to have on the market soon?

A: [13:59] Yeah, I didn't even talk about that. So I had said the impetus was like lobster industry. What can we do? Can we help with lobster warp in any way? That is still a relatively – like pretty highly used, as in like reusable, as in like over

many years it's used. So people aren't throwing out their lobster warp every year and getting new stuff.

Before I even started Viable Gear, I talked to a ton of people in the lobster industry and then a ton of people in the aquaculture industry, because I wasn't going to start something that people would just like not even use in the first place. So I was actually really hesitant. I didn't think that the lobster industry would be interested in a product that was biodegradable or anything different than what they were doing now, especially with all the pressure they had on them already. But people were really open to the idea – not necessarily of the lobster warp, because it was too hard to even talk about all the changes that were happening with that already. But we started talking about ropes, which then led to like, what's a lower-risk rope? And it's usually twines that are used, but also you can make a bait bag out of twines. So for us, we said, OK, great, bait bags. We can help you guys with that easy. Not easy, but easier than lobster warp. So that was where a smaller piece of gear came into play.

So our first product to market is a twine that can be used in the aquaculture industries to grow more seaweed, which reduces nylon twine that's being used today. A lot of farmers kind of call it like the dirty little secret of the seaweed industry, because it is this like plastic that gets biofouled onto their longlines, and it's really hard to get off at the end of the season. So that is really low-risk. It's like four or five months in the water and that's it, and then it can start to biodegrade and like marine compost.

That was really fun and exciting when we realized, OK, great, it doesn't have to be this like big, crazy piece of gear that we're replacing. Also, if the twine works, then we make a bait bag out of it. So that's where we're starting with twine, but the twine can also be used across industry. The agriculture and farming industries use a ton of twine. Everyone used to use hemp twine to tie up their tomatoes and stuff in greenhouses. Now, most people are using nylon or polypropylene. So we're going to also market to that industry. But a twine is the first product, then bait bags, and then we can kind of go from there with some other meshes and stuff for the aquaculture industry or farming industry. But we're starting with those two for now.

Q: [16:38] God, that's so exciting. I'm curious – when you were talking to all of these lobstermen, aquaculturists, were there any things that really surprised you from that or things you kept hearing?

A: [16:48] Yeah, I think there's like a few things that surprised me. One was kind of something I figured, but people were really open to – this isn't the part I figured. People were more open to using a new material or something that was better or would help them be "better ocean stewards" if the cost was right. That's kind of where I was like, OK, I figured cost was going to be huge – that people were like, yeah, if it costs the same as a current bait bag, we'll buy it. Which I was like, great, that's awesome. But I wasn't expecting them to be like, yeah, we'll try it for sure. There was a bunch of people who were like, yeah, why wouldn't we just give it a

shot? If it doesn't fish as well, we won't use it. But the goal is that we'll have it all tested before we market it as like exactly a bait bag at that point. So we've been in touch with and have letters of support from the Lobster Institute, which is exciting, because they can do that testing for us.

So it was like really around relationship building once you start talking to people – like, all right, how does getting a piece of gear into this industry work? We just learned a lot about the industry. But people were kind of excited about – like, oh, have you thought about this? Or my question at the end of my customer interviews were always like, is there a piece of plastic or something that you use on your boats that you identify using the most that's like plastic? Because I think a lot of people, including all of us in day to day – if you really think about it, you're like, oh, wow, that's a lot of plastic we consume. But you might not be like, this is the number one and identify it the most.

But like far and away, almost – I think it was like 90% of people said zip ties. Aquaculturists, lobster, commercial fishing, scallop trawling, everyone was saying zip ties, which was really shocking to us. And they were like, yeah, that's a really good idea. Bait bags – we'll use that. But have you thought about zip ties? Oyster fishermen were like, have you thought about zip ties? So that was the impetus of us saying like, OK, well, we're clearly hearing this. So while we haven't thought about injection-moldable plastics, we need to go that direction at some point. That's where the pelletizing of our material is going, so we can hopefully make zip ties for the industry. Because that just wasn't wasn't on my radar. Like I knew people definitely – grew up in an outdoorsy household. My dad uses a lot of zip ties for sure. (laughter) But I hadn't thought about it really in commercial fishing, which was really interesting.

Q: [19:19] And like with that, I'm curious – do you have like a fantasy large line of products, like I carry all these different things?

A: [19:27] Yeah, there's definitely like a big future lineup. But you know, other than kind of – like I'm such a take it one step at a time type person, because I feel like people can get out over their skis if they're like thinking too far in the future. But I also think it's important. So yeah, the lucky part is that with our twine, we can make a ton of products, including like landscape fabric, which is the black kind of plastic that goes over farmlands or in other landscaping uses. But we can take our twine – and the idea that we've talked to people about is that you put that directly in a loom and it makes fabric. So we could do a lot more products than we were thinking initially just by having the twine as like a baseline, which is really exciting.

And then if we can get the injection-moldable plastic stuff, then zip ties are far and away our number one. But there's a lot of stuff that's injection-molded that's really single-use. And while our initial thoughts were that we were helping create solutions for food harvesters across the board who don't have other alternatives on the market right now, there's also a lot of injection-moldable plastic that could be really easy. I mean, we think about things every day like buckles – literally like on

your bike helmet, like that type of buckle. It's not getting heavy wear and tear. So there's just things like that. We'll see where we go with it. But the idea would be more like we make a specific set of products, and then we sell our pellets to companies who are making buckles and stuff like that. So they take care of that and just procure the material from us.

Q: [21:12] And in terms of production – as much information as you can share – where are you getting the seaweed to start doing this?

A: [21:19] Yeah, so we are using all the types of seaweed that can be grown here, but we don't have a biorefinery in Maine or in the US, which is a problem. And there's companies that are working on it, like Everything Seaweed, which is based here at the Ocean Cluster. But we have to work with Ireland and Scotland and a little bit with Japan as well at this point, just because we can't take the raw seaweed and do what we need to do with it. So that's kind of like a plus and a minus, which is our formula is proprietary and really amazing at this point, and we have fantastic inputs, but it needs to scale in the US. And the only way it can scale in the US is if we have a biorefinery.

So the goal is to use Maine-grown seaweed. And we'll probably have to supplement with seaweed from elsewhere, just because we can only produce so much. And so much of it is – well, like almost all of it is going directly into the food industry right now and like a little bit into fertilizers and stuff. But yeah, we want to use Maine-grown.

Q: [22:23] Great, thank you. I'm just going to kind of run through a bunch of questions that you just can answer as it feels, right? Do you hold any licenses? So that could be commercial fishing licenses, any other.

A: [22:36] No.

Q: [22:38] Great. Do you own a boat?

A: [22:39] No.

Q: [22:40] I'm going to ask you a few questions about your experience in the industry beyond fishing or harvesting. If anything comes up, please – do you have any experience in bookkeeping, bait, or gear preparation?

A: [22:55] No. I feel like maybe gear preparation in terms of like lines and stuff, but probably like technically no – of what you're thinking.

Q: [23:04] Thank you. What about post-harvest processing, marketing, or trade?

A: [23:09] Marketing, yeah. And I have done a lot of seaweed harvesting – or not a lot, but I've gone out a few times to harvest seaweed, which is really fun.

Q: [23:20] Can you talk a little bit about that experience?

A: [23:23] Yeah. I mean, getting into this industry, I wanted to learn every aspect of it. So part of that was talking to as many seaweed farmers as I could, and a lot of that was also saying like, can I come out and check out your farm and harvest with you? People do it in all sorts of different ways. It's similar to the lobster industry. And just a very Maine-type thing, where everyone has come up with some type of technique that works for them or in their size farm and all of that.

I've been mostly on smaller farms, so it's a lot of hand-cutting and stuff. To me – and maybe this isn't because it's my job, or maybe people who do it for a living still feel this way – but I feel like a day out on the water when you hit it right on like a nice, sunny day, even on like a cold April day, is still pretty lovely to be out there just – I mean, tediously cutting seaweed, but it was kind of fun, because I got to see that side of the industry. And then you bag it and it goes to – it gets picked up by the processor and goes from there.

Q: [24:24] How do you think those experiences informed the way you interact with the work now?

A: [24:32] I mean, I think it's so important when you're going to be part of an industry to know or experience all sides of it. So again, like I've been on a lobster boat before. I think it would be kind of weird, maybe, to grow up in coastal Maine if you haven't been. But I think it's important to see all sides of it and know all of the people from – I don't like the term top to bottom, but it's like east to west of the industry. You can't really understand all facets of your job unless you know kind of like where everyone is in that industry and where people are coming from.

So learning what was really hard for the seaweed farmers was when we decided to like – hey, well, we can make a twine. And we would never have thought – like replace the nylon twine that's used in seaweed nurseries. Like it's really niche, but it's also used globally to grow seaweed. And it's not something I would have known about unless I started really talking to nurseries and started talking to Atlantic Sea Farms off the bat and stuff like that where it was like, what are your problems? What plastic are you using that we could help you replace? So coming at it from the solutions lens and just talking to as many people as possible I think is always really important. And I definitely don't think I would like be where we are today without talking to so many people across the seaweed industry, including farmers, mostly.

Q: [25:56] And do you have any experience in – and I feel like probably a lot – in research and development when it comes to these kind of things and being in the process of that?

A: [26:07] I guess now I do. I did not have a background in R&D at all. But I kind of just like – day by day, you know, you figure out – what do we need to do? What are your milestones? Like if you set the right goals with the right timeline, I feel like you can kind of chip away at getting to any – like wherever you need to go.

So my background was in marketing and management consulting in terms of building strategies for companies and helping teams kind of work towards goals within those strategies. I feel like that was really helpful for me to say, where do we need to go? And in order to get there, what do we need to do? Working backwards has always been really helpful for me. And yeah, I guess I have background in R&D at this point.

Q: [26:55] Thank you. What about any background in food prep or consumer interface?

A: [27:01] No. I guess consumer interface from like a marketing lens of things, but not directly from like the food lens. And then food prep just because I worked in catering for a thousand years. (laughter) But that's it.

Q: [27:19] Great. And what about in advocacy or community-based organization related to fisheries or aquaculture?

A: [27:24] Yeah, so related to fishing and aquaculture, I'm on the board of Saltwater Classroom, so that's marine education and like an ocean-based curriculum for kids. I always say starting young is how we're going to make change, especially policy change. And all of the things that we need to really do is like education at a young age. So I believe that kind of like goes across that whole swath of everything, really.

But then I'm also on the board of Hurricane Island. So that's also kind of like marine programmatic – and there's a lot of aquaculture work and research happening on Hurricane which is really exciting, and they just built a big research station. So hopefully more research and education can come off of that island. And I think it's really cool to have that just like in the center of Penobscot, where people can really tap into it and make actual changes that need to happen in that area.

Q: [28:18] That's awesome. Thank you. And then this question I think is going to be really hard to answer, but what does an average day of work look like for you?

A: [28:25] Oh, yeah, that is hard to answer. At one point, it was me in the lab a lot doing just like compounding work and messing around with material formulas and stuff like that. I feel like now it's a lot of – we're in a raise, so a lot of trying to figure out what that looks like for us in terms of talking to the right people for fundraising. And that is not my favorite thing, but that's OK. We have been grant-funded up until now. So at one point, again, it was a lot of grant writing and stuff like that. It changes based on what we're doing with the company – a lot of managing and trying to work through legal documents based on the partners that we're working with and all of that, just like good business operations stuff that is not the fun and sexy, but you have to get it done to get work done a lot. So yeah, it changes based on the day. That's not a good answer, but –

Q: [29:29] But I can imagine you probably have so many different hats that you have to wear and think about.

A: [29:33] Yeah. Luckily, I have a great COO. She lives in California. So she's kind of like our West Coast arm, which is cool, too, because I think it's great to kind of say we're across the US, if you will. But yeah, that has helped a lot – which is like hire the right people who can really help progress your business, for sure.

Q: [29:55] You mentioned being pregnant. If you don't mind sharing it, I'm curious – how do you think that will affect what the average day looks like for you, or how are you thinking about that as you look forward?

A: [30:06] Just like stress and anxiety, basically, when you own your own company and like – what does that look like? Because yeah, of course we don't have that stuff in place, especially as the CEO. It's like, OK, well, who knows what this will look like come February, but we'll see. So I guess it's really just like thinking about it and then trying not to think about it a lot of time to actually get work done, because it can be a lot. But we'll figure it out. We'll come up with a plan.

Q: [30:36] Thank you so much. And then how do you – or do you feel like your background or identity shapes your work in the marine industry in Maine?

A: [30:45] Yeah, I think that's a good question. I think if I hadn't grown up on the water and kind of like knowing what the marine industry looks like or basically knowing what it looks like to even be someone who's like out on the water, let alone making their living on the water, and knowing especially just like really good friends of mine who were directly in that industry, I think I would kind of be like – I don't know if clueless to it is like the right word, but I don't know. It's so hard to articulate what it's like to like grow up in coastal Maine and grow up near the working waterfront without being in it. Because I'm sure you talked to so many people who grew up in the working waterfront, which is very different from growing up adjacent to it, which is also very different from growing up like not at all – like inland Maine or not even in Maine, you know?

So I think it's – I'm not like the best at articulating this stuff anyway, but yeah, I think I don't even know what I would know if I didn't know what I know. You know what I mean? (laughter) It's just such an interesting thing to grow up thinking that you know something about something and then not being in it. I don't even know if this is something I would have done. You know what I mean? I think if I didn't grow up on the coast, would I even care as much about ghost gear impacting things? And then I also like have endocrine issues and grew up eating a ton of local seafood, and I'm like, OK, so like did micro- and nanoplastics in our food system have anything to do with the endocrine disruptors that I might have had, or was that genetic?

There's so many public health things, too, around what we do and the why that it's so intertwined. It's hard to really see where that would be without going to an island and seeing the ghost gear. I had kind of been spinning my wheels on getting

out of the industry and the job that I was in anyway. So if I hadn't been on my parents' boat up in the Midcoast, able to go out to an island, would I even be doing this? I don't know. So you can untangle that web of an answer at some point. (laughter)

Q: [32:56] That's great. And I'm curious – do you think there's a gendered element to the work at all? Do you feel like that affects your –

A: [33:01] That's a good question. Yeah, that's a good question. I haven't thought about that other than women founders and CEOs don't get a lot of funding. It's like 2% of the funding that's out there. I know that has a lot to do with the work day to day that I'm in, just being a startup. And a lot of the time around the blue economy, I do feel like I'm certainly in the minority as a woman. I'm certainly in the minority as a woman founder.

I don't know if it affects how I got into the work at all, but I feel like being a woman in our society has an effect on everything. That's how I am the person I am today. And that's why I feel like people think I'm kind of a tough asshole sometimes, is because when you grow up in the business world and corporate America, when you're a younger woman in a boardroom, you kind of unfortunately take on a lot of hypermasculine traits that get you promotions or get you whatever, because you're conforming with the typical.

I feel like founding your own company, it's really interesting to try and shed some of those to be like, OK, we don't need to be assholes. Let's be nice. I mean, I generally hope I'm a nice person, but there's just certain things where that just becomes ingrained in you in your 30s to be in this society as a woman and especially coming out of business. I feel like a lot of people don't think about that.

And I think ageism is something that we don't talk about a lot, and ageism is really huge in corporate America, and it can really affect you. So I definitely see myself sometimes working with younger people and I'm like, OK, how do you not be a – just like let's incorporate everybody. But then there's still that element of like, OK, but you also just don't know stuff at that age. So it's like a really interesting balance. I think I'm learning a lot of my biases that I know I have, but also I feel like I am kind of aware of certain things that have impacted where I am today.

Q: [35:06] Thank you so much. And we've been talking to women who are in a lot of different places with family. So this question is thinking about gender and expectation. How do you feel your work interacts with any family or caregiving responsibilities you might have or have in the future? You spoke to the pregnancy already. Is there anything you maybe wanted to add?

A: [35:28] Yeah, it's just like a whole mind spin – spiral at this point, I think, around it, because it is like a – I think our family structure is a little more fluid, maybe, than other ones. I feel like my husband and I aren't stereotypical as much of like – I don't know. I'm not going to place any stereotypes. But I feel like he is also open to being like, OK, I can do childcare, or I don't have to – I mean, again, in our

society, I would love to be at home with a kid, and I think some women don't think that. But I'm like, that sounds really kind of cool to get to watch your kid grow up. But then there's also so many gender stereotypes around people who are like, oh, so you don't want to have a job? And I'm like, that's not what I fucking said. But I want to raise my child, you know?

So there's weird things like that all just going through my head right now of like, I don't know what it's like yet, but I've watched people – a lot of my friends do it, and it seems like really fucking hard. And that's all that I have to it at this point – which is like I don't have any answers as to what it's going to look like. I just know it's going to be hard. And like, yeah, I'm however many – like 11 weeks, and they're like, you should definitely be on lists for a preschool at this point. And I'm like, what the fuck? That's crazy. But that's just what it is in Portland specifically. I think it's easier in other communities, maybe, to get childcare. But here, it's really hard. So unless one of us, my husband or I, decide to leave our jobs or do things really differently, it's just going to be tough.

Q: [37:06] Thank you so much for sharing. I'm going to sort of transition to questions about environment – just like environmental change. Because you've talked to so many people and you're kind of interestingly positioned, feel free to interpret these a little bit differently. Can you describe any changes in the marine environment you've noticed or like have come up a lot?

A: [37:27] Yeah. I mean, I think this goes back to just like growing up on the coast of Maine, because I notice differences all the time. Growing up, we had to wear like flip-flops or Tevas on the beach. Otherwise, you'd step on a sea urchin. Now, it's really rare to see one. So that's just like how it is. And it's really interesting that even in my 30-plus years that I've noticed something so impactful like that. Like it truly was something of my childhood – which was like pulling sea urchin spikes out of my feet, you know? And now, again, that's not a thing at all, which is really interesting and sad and total environmental change.

But I've also noticed, just because of the space I'm in, more plastic places. And again, this isn't a negative on the industry, because they've had to make these changes, but the more breakage points you have in your lines, the more ghost gear you're going to have. Because if something hits that breakage point, then you have just like free-floating line in the water. So yeah, there's just like more rope versus buoys and stuff that I've seen out there.

And then oddly enough, this year we've heard of bait bags being ripped out by seals more than ever. I kind of thought that was like – huh, what a weird little fact that I heard. And then I was on the phone with someone yesterday who said the same thing. They were like, oh, yeah, apparently the seals are ripping bait bags out more this year. I don't know what type of environmental change that is, but it seems like they're figuring that out or are like more desperate for food or like – I don't know what it is.

But there's definitely a lot of change that – let alone just like you put your foot in the water, and it's warmer. That might be something different that's like down here in southern Maine, and I grew up up in the Midcoast, so the water temperature is different. But down here, I'm like, this is crazy. This is not Maine ocean water, you know? It's like warm. So yeah, that's my general viewpoint.

Q: [39:28] Yeah, absolutely. And I'm curious how that's informed by all the people you talk to. Do you feel like you have like a really –

A: [39:34] Yeah, I feel like it's all over the place. Aquaculturists specifically I talk to a lot just still, because they love to check in and kind of like see where we're at, because they're kind of in the camp of like, do you have this like yesterday? Versus like, OK, cool, let us know when you have it out.

And I don't know if I have taken away anything other than like the warming water. Everybody kind of talks about the water being warmer. Everyone's impacted by storms. Like a ton of people lost a lot of their gear last year, obviously, across fishing industries and aquaculture industries, but a lot of oysters were gone, even if they were sunk. That's just like a lot of water moving around to not lose gear when you sink your oyster farm.

And Hurricane was – the island was impacted by the storm. So I'm definitely part of places that have had major storm impact. And then you have to have like major infrastructure work. As many people know, infrastructure work on an island is really fucking hard. You have to have like barges and all of that stuff come out. Like it's not as easy as just like hiring a company to come grate something.

Q: [40:48] Yeah. And in terms of how those things are really influencing or impacting it – I know that is a huge impetus behind starting it, but I'm curious if there's anything else you wanted to describe.

A: [41:01] No. I feel it – well, maybe, and I'm just not thinking of it. But definitely an impetus of why Viable Gear exists is because of all the impacts of environmental change and plastics and – you know, a big believer in the fact that nothing's going to change unless policy changes around plastics. And when we talk about plastics, we really need to talk about the oil industry. I think a lot of people kind of like don't know or think about the two being connected.

Yeah, I think that there's just like a lot of environmental impacts that when we talk about ocean plastics need to go back to fracking in the Ohio Valley. And that's really hard for people to make that exact – like, oh, wow. OK, this piece of plastic is because of like X, Y, Z. Or where did this even come from initially? Or we're piping things from like Louisiana's Cancer Valley – or Cancer Alley, sorry – all the way up to some crazy plastic production plant in like Mississippi. So it's like things moving all over, piped all over.

I just think there are so many more environmental impacts that are impossible to even get into at this point from like finding one piece of plastic in the water or

having to use plastic. That's how I want to frame it always is like there's not other solutions right now unless you go back to like hemp or cotton line, and people don't want to do that because they don't think it works as well. Maybe that's true, maybe that's not. I'm not here to decide that, because I don't know. I can read as much as I want about it. But people are just used to using plastic at this point, and people are used to being like a to-go, quick society. So unless you change your mind frame and your entire habits – which you can do, but it's really hard, and people have other shit to worry about.

But I did that whole like plastic-free, low-waste journey, and it's hard and stressful. It impacts your health and impacts so many other things. Because you can't really buy produce not in plastic in certain places. Yeah, I think there's so many rabbit holes to go down to unpack a lot of that, but I'm sure it impacts my day to day more than I think about it.

Q: [43:21] Sure. And with Viable Gear and using that as a way to adapt to all of these different things and working in these huge systems, I don't know, I'm just curious – how does that feel, or how is it working in that space? What fuels that movement? Does that make sense?

A: [43:39] Yeah, I feel like I'm in therapy. I'm bad at articulating my emotions. I'm like, I don't know how that feels. (laughter) It feels like something, I'm sure. Yeah, I mean, I think this – I can only speak to myself. This all started with probably some serious eco-anxiety. When you really learn about what is going on with plastics and how it's impacting the oceans – and not even our oceans, but like our soil health and all of that. A lot of it leads to ocean health, of course, but any species is impacted. And any plastic that ends up in the water is impacted by the UV light in the marine environment and it breaks down. The more you know, I feel like the more you kind of get stressed about it. I feel like then some people are just like, oh, God, I can't think about this. And then some people like me are like, nobody's doing enough. I have to do something about it. And that can just change the trajectory of your life.

So it feels like I learned too much to not do it. Like I kind of got to a point where I was like, I kind of have to do this, because I don't know what else to do about knowing all of this information. And it's also fun and exciting to work on this, of course. I think, like catch me on a different day, and I might say something different. But I really do love the work, and I do it for a reason, for sure.

Q: [45:09] Thank you. And as you look towards – I know you're still designing, and the product's not on the market yet. But do you really – like I'm curious – do you think it's really going to help? Do you think it's going to move things in a new direction?

A: [45:21] Yeah, I mean, I'm definitely not naïve enough to think it's going to change the world, but I think it's a start. And I think the more that people can work on this, the more that there will be large changes. And I hope that – I mean, of course it's like, you do this work because you hope it is a big change, but you have to start

small. And I've always been like – you know, it's like the people who are trying to go plastic-free in a day. Like you can't do that. You literally have to go like day by day.

So that's where it's like us starting with a small product. We're like, OK, we're going to tackle nylon twine used in the seaweed industry and used on farms – like pretty small. I mean, not small markets, like relatively pretty large, but a small product. So let's hope that small product gets traction. And again, we wouldn't have – or I wouldn't have founded this unless I had talked to people who were like, that sounds awesome, and we would use that, and we would buy it, and we're happy to help you test it and all of that stuff.

So I feel like especially being back in Maine and starting Viable Gear in Maine has been wonderful. Like it's been a very supportive startup community, very supportive blue economy startup space where people are just like, how can we help? And so many people have like – oh, you should talk to this person. You should talk to that person. So I feel like it just was a really good time and a really good space to get into this. And some people tell us we're ahead of the game. You know, everyone has their own opinion. So let's hope we make a difference a little bit, at least with a few people.

Q: [46:57] Yeah, you've mentioned, I think, a lot of people you're working with and drawing on. This is like a list of things that may inspire things and that. But I'm curious – are there anything that you're really drawing on – maybe that's resources, relationships, knowledge, training, or organizations – that are really helping you as you're doing this work?

A: [47:14] Yeah, everybody. Like more heads are better than one. Like I'm just one person who doesn't have a background in this. So I am definitely more on that guise of like we wouldn't be where we are without so many people. And I think I've probably already mentioned most of the people that we really rely on, but if we hadn't found Colin and his background in the seaweed industry and me feeling like I pressured him into doing consulting for us – I was like, please, please, please work with us – that we wouldn't be where we are today with our material. That's also because he knew about other seaweed inputs and stuff that I might never have come across.

And then we're working with the Roux Institute on like pelletizing our material because this wonderful person, Bill, moved here from Chicago because his wife got a job. It's like things just fall into – not fall into place. I'm kind of one of those people that's like, you kind of make your own luck, or like you find your own luck or whatever. But things with Viable Gear have been really awesome in terms of like – you work really fucking hard to find people, and sometimes it takes you like a month, and sometimes it takes you like years, and that is a struggle. But hopefully by the time you find that person, it's the right person or the right space in it. Yeah, so there's so many people we rely on. I would say like we're sitting in the Ocean Cluster right now. Without the Ocean Cluster, I doubt I would be where I am today. Their network has been amazing.

I was part of an accelerator right at the start that was called the Seafood Sprint with the Gulf of Maine Research Institute and Gulf of Maine Ventures, and then SeaAhead in Boston, and their networks were indescribably amazing. And it was kind of at the same time I was working at the Ocean Cluster.

So I feel like I was lucky enough to plug into a lot of resources and places that really jumpstarted and accelerated me talking to so many people. Because I knew lobstermen, but I didn't know any seaweed farmers. And I could kind of figure out how to get people's contacts, but there's nothing better than a warm lead or a warm email being like, hey, you should talk to Katie who's starting this company, and then people will respond. So I was just lucky enough or maybe bullish enough to kind of like fight my way into all of these different, really wonderful incubators and accelerators that have helped so much along the way.

Q: [49:46] Thank you. And you spoke a lot to this already, but if there's anything you wanted to add – I'm curious – as you look towards the future, what are the next steps?

A: [49:54] Yeah, the next steps are really – like focusing on a raise and getting our pilot production going. It's kind of like what my main focus is right now. But the ultimate goal is to have a product on the market by 2025. We are working with some amazing seaweed farms and hopefully land farms as well to test our material in 2024 – end of 2024. And that's if everything goes well at this production place in Sweden, so let's hope. But I always kind of keep my hopes baseline to low so they get exceeded, where it's like I'm sure something will come up where that timeline might be thrown. So we're ready for that, but that's kind of the focus right now is really – like we've done what we needed to do lab-wise, and we've applied to a ton of grants, and we've been funded non-dilutively until now. And all of those are big and impressive things at this point, but we need to make the jump a little bit further or just like really getting a product to market for me.

Q: [51:07] Great. And what is your biggest concern about the marine environment for the future of Maine's marine industry?

A: [51:13] Oh my God, that's a big question. Biggest concern about Maine's marine environment?

Q: [51:21] Yeah, or maybe like a different way to frame that question, if this is useful, is like, if you could tell like a policymaker, for instance, or just like a person in power, what should be like a big priority for that person thinking about the marine environment?

A: [51:34] I have so many, I feel like.

Q: [51:36] You can list many. You don't need to give me one.

A: [51:38] Yeah, I mean, they're probably all tied together, but also like separately at the same time. Because obviously where I am day to day, I'm thinking about plastics in our marine environment and cleaning up our food system. And how do we come up with policies that help people implement solutions versus make people feel like they're forced into solutions? Also, putting plastic policy in place when you don't have solutions is not helpful. Like there has to be these solutions first. So I think it's really focusing on R&D around new and innovative materials and then new and innovative ways to do things.

Like Abby Barrows' farm, Deer Isle Oysters – look, they're doing really awesome things with plastic-free gear, and they're not using new material. I mean, they are with like the MycoBuoys and stuff like that, which is also a wonderful company – MycoBuoys – that makes the mycelium-based buoy replacements.

But I think it's just being innovative and not afraid to kind of have the state say, let's actually focus on this. Because I feel like people are supportive, but no one's putting their money where their mouth is. So there's a lot of support and not a ton of funding and just like a funding gap around really good ideas and then getting those good ideas to market.

But I also think – like big proponent of we need the lobster industry to stay around. And also while it can, unfortunately – just like we've seen the shift more Down East in lobster – and I'm definitely not a marine, whatever, biologist – (laughter) can't even think of that word – but you hear people talk, and I think it's pretty clear that things are moving north, Down East. I don't know what that means for the lobster industry. But I think while the lobsters are here, we need to be really supportive of the industry and supportive across all of the industries that are really important to our state and more kind of getting back to the roots of – like we don't have processing plants here anymore. And talking to people who are working on canneries and stuff, and it's like the closest cannery's in like New York or something crazy like that. We used to be a state that had hundreds of canneries up and down the coast, and the fact that there's not one between here and New York is crazy. So how do we just bring industry back to Maine that's going to really help Maine thrive? I think that includes everything within the marine environment.

And also definitely not against the Environmental (sic) Species Act – because I feel like it does sound like I am sometimes – but also we want our really important marine ecosystem. So I think there's a huge balance of how do we do both? And I'm also a proponent of – like I think there's a way to do both, where we like figure out new technologies to track whales and do that really responsibly and protect our marine environment and protect the species there, but also protect people who are working on the waterfront.

Q: [54:55] Great. Thank you for that answer. That was awesome. Have you participated in any climate resilience or adaptation trainings for fishing and aquaculture?

A: [55:02] I don't think trainings. I've done Sea Grant's whatever – it's called like the working waterfront program or whatever. But I wouldn't consider that like a resiliency program.

Q: [55:18] What strategies do you think would be effective for building resilience on the coast?

A: [55:25] Oh, I don't know if I'm the right person to speak to that. I feel like we're doing a lot of rebuilding from the storms right now. And if we do that a little more thoughtfully, I kind of – and again, I don't know about it enough to say people aren't doing it more thoughtfully. I'm sure people are. But like thinking about materials that are used and longevity of them, or like, OK, if they are going to break apart, what are they made of?

And I think cost to all of this is really important, especially for the people who these aren't like their second and third and fourth and fifth summer homes. Like those people should definitely be using more sustainable materials that – like if their dock is blown apart, let's like not make it a plastic dock. Let's make that wood. Stuff like that that I feel pretty strongly about, but also don't know enough about to really speak to it eloquently.

Q: [56:26] Thank you. That was a good answer. Can you tell me about any opportunities or positive changes you've seen in your time doing this work?

A: [56:34] Yeah, I feel like I see positive stuff all the time, which is exciting, and that's what's part of keeping me and I think a lot of us going, which is – again, I mentioned Abby and the work that she's doing. We were just on a podcast that came out I think like today or yesterday from the Island Institute and Galen. I feel like there's people doing really awesome work towards this. And Maine keeps it really small. Like Abby's done an amazing job or people have done an amazing job picking up her work and kind of expanding that outside of Maine. I think we need more of that, because there are some really cool companies here and in Massachusetts, too. Like there's people working on really cool smart buoys that will help farmers and stuff like that that are important and exciting to see. Because if there's going to be all this crazy technology, we might as well use it for good, not for evil, because – like I don't do that. But yeah, I'm also just an advocate of putting money into our world versus like blowing holes in our ozone. So I feel like when I talk about funding, then I'm also like, OK, let's like bring it back to our ocean and figure out how to like make our world healthy. So yeah, there's a tangent off of that, but –

Q: [57:48] That's great. And I'm curious – what is your real hopeful vision for the future?

A: [57:55] Oh my gosh.

Q: [57:57] Or Maine's marine industry, I guess, specifically.

A: [57:59] Yeah, I mean, I feel like I've always been like – I feel like everybody can use our waters and get along, and I still feel that way. You know, there's always been funny rivalries out on the water from like the dawn of time, whether it's like industry or recreation versus commercial. But I do feel like policy can help us, and I think that's the only way to make real change.

And I also don't think that targeting day-to-day consumers and small industry, or small individual-owned businesses like the lobster industry, is going to do anything to make a change. Just putting all of the change on individuals is not where we need to go. So I do see hope, hopefully, that if we make more global change, that things will be a little bit better. It's like we know the top 10 – like we know where our plastics are mainly coming from. So I always am like, it's not an individual's fault, and don't take that on. So I feel like the only way to have real change is to really have policy affect the big players out there.

And I guess in a more positive light, I feel like we can get there with companies like what Viable Gear is doing. We're doing this for a purpose, and it is to make our oceans more healthy. And it is to hopefully reduce plastics in our oceans globally and in our soils globally and all of that. So yeah, there's hope.

Q: [59:37] Have you noticed any change or just have you had any observations about women's status, participation, or presence in the marine industry in your time working with Viable Gear?

A: [59:49] Yeah, I feel like – I don't know if it's just me, but I feel like I tend to find women in the industry. So I don't know if that's like a me thing or a them thing being so willing to talk to me or stay connected. But I don't know, women are just better. Sorry. (laughter) I don't know. It's just like a bunch of badass women doing really cool things out there. And I think that's why there's support in this space or why I feel like there's more women doing this that I know, anyway.

I feel like women tend to take things like this onto their moral plate, too. That could be wrong. I'm not like a gender studies expert at all. I don't know. I just feel like there's women who are taking on these issues and being like, OK, what can we do, and how do we do this? There's always been badass women on the water, and Maine's just full of badass Maine women anyway. So coming back here, I was like, yeah, I like Maine women a lot. They're great.

Q: [1:00:59] Thank you. Is there anything else you wanted to mention before we sort of bring things to a close?

A: [1:01:05] I don't think so. I mean, thank you guys for doing this. Yeah, it's a fun place to be and a scary place to be and an exciting place to be. And I think doing this work is really important. So the more people who support it and know that we're coming at it from a positive lens and not wanting to step on any toes in any industry – it's like really just creating solutions.

And working directly with people – I feel like that's a big thing that I forgot to mention, which is like we'll talk to anybody. If anybody is like, we'll test this for you or has questions – like if people are totally against what we're doing, I'm really curious why. And I always want to talk to those people almost even more, because it's like, really? Why? What does this do to you that you're threatened by that we're working on a plastic replacement? But yeah, it's just like a fun space to be in right now, and we'll talk to anybody. So yeah.

Q: [1:02:01] Great, thank you. Do you have any questions before we call things?

Q: [1:02:06] I don't think so.

Q: [1:02:07] Great. Well, thank you so much. I'll go ahead and stop this.

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